

CANCER VOCANS MAJOR HERBST, 1782 (CRUSTACEA,
DECAPODA): REQUEST FOR THE USE OF THE PLENARY
POWERS TO VALIDATE A NEOTYPE. Z.N.(S.) 2235.

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The present case is that of a species, the type of a well-known genus, the identity of which until very recently has always been misinterpreted by authors. The application of the specific name to the species for which it was originally intended will cause an undesirable confusion, which could be avoided if the Commission, under its plenary powers, validates a neotype for the species, which does not fulfil the conditions set by Article 75 c (4) and (5) of the Code, and thus cannot be selected in the normal way.

2. The genus *Uca* Leach, 1814, type species by monotypy: *Uca una* Leach, 1814, is a well known genus of fiddler crabs (Brachyura, OCYPODIDAE). In Opinion 712 (1964, *Bull. zool. Nomencl.* vol. 21(5): 339) the name *Uca* was placed on the Official List of Generic Names as Name No. 1648. The specific name *major* Herbst, 1782, as published in the combination *Cancer vocans major*, an objective senior synonym of *Uca una* Leach, was at the same time placed on the Official List of Specific Names in Zoology (as Name No. 2019), as it is the oldest available name for the type species of the genus *Uca*. *Cancer vocans major* Herbst, 1782; *Ocyopode heterochelos* Lamarck, 1801; *Cancer uka* Shaw & Nodder, 1803; and *Uca una* Leach, 1814 are objective synonyms of each other as all are based on the figure and description given by Seba (1759, *Locupletissimi Rerum Naturalium Thesauri*, vol. 3: 44, pl. 18, fig. 8) of the species that he named *Cancer uka una, Brasiliensibus*.

3. H. Milne Edwards (1837, *Histoire naturelle des Crustacés*, vol. 2: 51), when describing a new species of fiddler crab from Cayenne, to which he gave the name *Gelasimus platydactylus*, expressed the opinion that "c'est à cette espèce que me paraît devoir être rapportée la Gélasime figurée par Seba (t. II, Pl.18, fig. 8) . . . La figure de Seba a été reproduite par Herbst sous le nom de *Cancer vocans major*". Since that time most authors accepted this synonymy. Until 1918 both the names *platydactylus* and *heterocheles* (or *heterochelos*) were used for it; after the publication in 1918 of Rathbun's fundamental monograph of the American grapsoid crabs (1918, *Bull. U.S. Nat. Mus.*, vol. 97: 381)

the name *heterochelos* adopted by Rathbun got the upper hand. In 1962 it was found (Holthuis, 1962, *Bull. Zool. Nomencl.* vol. 19(4): 240) that *heterochelos* is an objective junior synonym of *major* Herbst, and that the latter name should be used. The name *major*, having been placed on the Official List, then was commonly accepted, e.g. in such handbooks as Chace & Hobbs' "The freshwater and terrestrial Decapod Crustaceans of the West Indies . . ." (1969, *Bull. U.S. Nat. Mus.*, vol. 292: 213) and Crane's (1975: 136) "*Fiddler Crabs of the World*, Ocypodidae: genus *Uca*".

4. With the generic name *Uca* and the specific name *major* both on the Official Lists, and with the unanimous interpretation of the name *major*, there seemed to be no nomenclatural problems with *Uca*. However, recently Bott (1973, *Senckenbergiana Biol.*, vol. 54(4/6): 311-314) showed very convincingly that the identity of the specimen figured by Seba has always been incorrectly interpreted, and that most authors had been led astray by Seba's indication that the specimen came from Brazil. Actually, a close study of Seba's figure clearly shows that it is based on a specimen of an East Atlantic species, which is best known at present under the name *Uca tangeri* (Eydoux, 1835), and which occurs from southern Portugal to Angola, being the only species of *Uca* known from the Atlantic coast of Europe and Africa. Under a strict application of the Code, the consequences of Bott's discovery are that the species from South America and the West Indies, which in recent handbooks is indicated with the name *Uca major*, should correctly be known as *Uca platydactylus* (H. Milne Edwards, 1837). Further, the species known as *Uca tangeri* should be given the name *Uca major* (Herbst, 1782)

5. *Uca platydactylus* is not a very common species, so that a change of name here, though unpleasant, would not cause great disturbance, the more so as the name used at present has been in general use only since 1962. On the other hand, the name *major* has been adopted by Chace & Hobbs, 1969, and Crane, 1975 in two fundamental handbooks that will be the basis for work on these animals (taxonomic as well as ecological and behavioural) for the present and future generations of biologists.

6. If the change of the name *Uca major* sensu Crane to *Uca platydactylus* (H. Milne Edwards) would be only slightly disturbing, this is very much more so for the other nomenclatural change that results from Bott's discovery. The East Atlantic *Uca tangeri* is a well known species and between 1835 and 1900 the specific name *tangeri* has been widely used for it; after 1900 this usage became unanimous. Being the only species of *Uca* occurring in Europe, its ecology and behaviour have been intensively studied by European

zoologists and the literature, especially the non-taxonomic, concerning it is quite extensive (see Crane, 1975: 124, for a listing of this literature). The change of the specific name *tangeri* to *major* would be most undesirable, and would cause great confusion. This is the more true, since the name *major* has been in use for more than 15 years for a quite different species, and since in Crane's fundamental monograph the name *tangeri* is adopted.

7. It goes without saying that it would be most undesirable for the specific name *major* to be switched from one species to another, and as far as I can see there are two ways, both requiring the help of the plenary powers of the Commission, to avoid this:

(a). Dr. Bott (1973: 313, 314) was of the opinion that the names *Cancer vocans major* Herbst, *Ocypoda heterochelos* Lamarck and *Uca una* Leach could be considered "nomina oblita", since during the last 50 years they had not been used for the correct species. Even under the pre-1972 Code this interpretation of "nomen oblitum" was erroneous. Article 23b dealt with usage, not with correct identifications. Bott (1973) therefore ignored these names (he did not mention *Cancer uka* Shaw & Nodder at all) and used for the two species discussed here the names *Uca platydactylus* (H. Milne Edwards) and *U. tangeri* (Eydoux). The nomenclature adopted by Bott can only be legalized if the Commission suppresses, under its plenary powers, the specific names *major* Herbst, 1782, *heterochelos* Lamarck, 1801, *uka* Shaw & Nodder, 1803 and *una* Leach, 1814, for the purposes of the Law of Priority but not for those of the Law of Homonymy. The disadvantages of this solution are (1) that the name of the type-species of the genus *Uca* is suppressed, so that the Commission has to decide whether to recognize *Gelasimus tangeri* Eydoux as the type of *Uca*, or use its plenary powers to designate as such *Gelasimus platydactylus* H. Milne Edwards, and (2) it is possible that before 1835 other names have been given to Seba's fiddler crab, so that such names, when discovered, have also to be suppressed.

(b). Dr. Crane in her 1975 monograph used the name *Uca major* (Herbst) for the American species dealt with here, and the name *Uca tangeri* (Eydoux) for the European-West African species. To legalize these names, the Commission has to make use of its plenary powers and designate for *Cancer vocans major* Herbst, 1782, and all its junior objective synonyms a neotype specimen which belongs to the species that H. Milne Edwards described as *Gelasimus platydactylus*. The disadvantage of this solution is that the neotype belongs to a species different from the actual type. On the other hand, it legalizes the taxonomic interpretation of the type that has been accepted since 1837, and furthermore fixes the names

as these have been used during the last 15 years. Bott's (1973) study was followed by a paper (Bott, 1973a, *Senckenbergiana biol.*, vol. 54(4/6): 315-325) in which a preliminary classification of *Uca* s.l. was given, and in which the old genus *Uca* was split up into 10 genera (7 new), one of which consisted of two subgenera (both new). Dr. Bott died on 27th January 1974 and published no other papers on *Uca*. Crane's (1975) exhaustive monograph of the genus *Uca* (more than 700 pages) deals very extensively with the taxonomy, biology, ecology and especially the behaviour of the various species and will be consulted by anyone dealing with the group. The nomenclature used by Crane will be far more readily accepted than that proposed by Bott, who did not have the chance to elaborate his views.

8. It is for the above reasons that I propose the solution mentioned in paragraph 7(b) above. As the neotype of *Cancer vocans major* Herbst, 1782, I now designate the male from Cayenne, French Guiana in the Muséum National d'Histoire Naturelle, Paris, France, which Crane (1975: 601) listed as "Type of *G. platydactylus* ('type non spécifié')". This specimen is either the holotype of *Gelasimus platydactylus* H. Milne Edwards, 1837, or, if H. Milne Edwards had more than one specimen before him when drawing up the description, it is now made the lectotype of that species. The neotype was well described by H. Milne Edwards (1837: 51) and an account of the species is given by Crane (1975: 136). The original type material of *Cancer vocans major* Herbst, like most of Seba's dry material, cannot be traced. The present neotype selection, however, does not fulfil the requirements of Article 75(c) (4) and (5) of the Code, as the neotype is not consistent with what is known of the original type material and does not originate from the same type locality. Moreover, it is certain that the neotype belongs to a species different from that to which the original type belongs. The type locality of *Cancer vocans major* was said to be Brazil, but this is clearly erroneous. The correct type locality, judging by the range of the species, is either the south-west coast of the Iberian Peninsula or the west coast of Africa. This neotype selection can only be legalized under the plenary powers of the Commission. At the same time the neotype specimen should be made the neotype of the species that are objective synonyms of *Cancer vocans major*, all of which then become senior objective synonyms of *Gelasimus platydactylus* H. Milne Edwards.

9. The International Commission on Zoological Nomenclature is therefore asked to:-

- (1) use its plenary powers to validate the neotype selection for *Cancer vocans major* Herbst, 1782, made in paragraph 8 above; and declare this neotype selection valid also for

the junior objective synonyms of that species, viz. *Ocypode heterochelos* Lamarck, 1801, *Cancer uka* Shaw & Nodder, 1803, and *Uca una* Leach, 1814;

- (2) place on the Official List of Specific Names in Zoology the name *tangeri* Eydoux (1835, *Mag. Zool. Paris*, vol. 5(7): unnumbered page), as published in the combination *Gelasimus tangeri*;
- (3) place the following names on the Official Index of Rejected and Invalid Specific Names in Zoology:-
 - (a) *platydactylus* H. Milne Edwards, 1837, as published in the combination *Gelasimus platydactylus*; an objective junior synonym of *Cancer vocans major* Herbst, 1782, through the neotype selection validated under (1) above;
 - (b) *uka* Shaw & Nodder (1803, *The Naturalist's Miscellany*, vol. 14: pl. 588) as published in the combination *Cancer uka*; an objective junior synonym of *Cancer vocans major* Herbst, 1782.

No action is required for the generic name *Uca* Leach, 1814, or for any of the specific names *major* Herbst, 1782, *heterochelos* Lamarck, 1801, and *una* Leach, 1814, as these have already been placed on the appropriate Official Lists and Index in Opinion 712.